Butterfly & Other Invertebrates Club Inc. Newsletter

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AIMS OF ORGANISATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organise excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:
March issue – February 21st; June issue – May 21st;
September issue – August 21st; December issue – November 21st

COMMITTEE MEETINGS

A quarterly meeting is now being scheduled in order to plan club activities and the newsletter. The next meeting is being held on Wednesday, 13th October, 1999, at Jan and Rob MacSloy's home. Please phone 07 3824 4348 for directions.

EDITORIAL

Hello all, and welcome to our 14th issue of our newsletter. I'd like to thank all the contributors. This newsletter is intended for all our members, and your observations, questions and comments are invaluable. Our intention with the club and its newsletter is to popularise and increase the fun people can have learning about the environment, especially its smaller creatures, which make up the bulk of the world's biodiversity.

So please, if you've noticed something about an invertebrate - ring or write to us about it. The Queensland Museum can be of great help in identifying creatures, so that we get accurate genus/species information, but so much about the invertebrate world is unknown that you're observations may be the first- or they may be useful confirming someone else's observations. And many hands make light work.

In this editorial I'd also like to acknowledge some of our hard working Club members. This year two members have received public acknowledgment of their contribution to environmental issues. Our newsletter compiler/editor, Daphne Bowden, was given an Education Department Australia Day Award in January, and our regular contributor and checker of details in the newsletter, Dr. John Moss, was given recognition for his environmental work in the Redlands Shire. Congratulations to both of you.

Helen Schwencke

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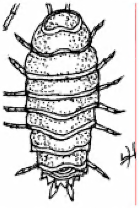
REPORTS

Why Slaters are Good for You **Guest presenter: Dr Glen Ingram**

Glen began his talk by explaining how he grew to be interested in slaters, having had a career that had focused on birds, frogs and reptiles. Slaters are Crustaceans, from the Superfamily *Oniscoidea*, belonging to the Class *Isopoda*. They are unusual in that they have parental care. They do not have visible larval and pupal stages. Newly hatched slaters are simply miniatures of adults, having passed through the earlier stages in the eggs carried around by the females. This makes the group less complicated to learn.



Another reason Glen gave for the group being attractive to an inquisitive mind is that the original literature about slaters was in French and Old German and therefore fairly inaccessible. Until recently, only 123 Australian species were described of which about 20 were from Queensland. The Queensland ones were mostly described by Wahberg (a German) from a collection gathered by a Swedish expedition carried out in 1911 by Mjöberg (pronounced "mo-be-air"). In 1972, the Frenchman Vandel did a revision of Australian slaters, but these were mainly from southern Australia and Tasmania. More recently, Alison Green in Launceston has worked on the group in Tasmania (and Krakatoa). With all the work done since Vandel, only 15 new species have been described from Australia. There are at least two hundred new species to go.

Slaters have a head plate (cephalon), 7 body (pereon) segment plates (tergites) and usually have 5 tail (pleon) plates (tergites) which are sometimes fused. The seven body segments each have seven pairs of legs (pereopoda). The coxal plates are usually fused to the tergites of the pereon to form epimeres, which flange out from the body plates above the legs. The tail plates have pleuropoda that house the lungs (pseudotrachea).

Slaters range in size from a few millimetres to approximately 2 centimetres (in the sea, there is a relative that grows to 50cm). The number of eyes (ommatidia) range from none to 16 pairs.

Slaters are found in a wide diversity of environments from inter-tidal, inland saltwater and terrestrial habitats. They are most common in wet or humid areas, though some have adapted to arid environments. Some are exclusively cave-dwellers (troglobites), others live in and move from caves to the outside (troglodytes). Some slaters live in the burrows of giant cockroaches and quite a few are myrmecophiles (ant-loving), that is they live inside ant nests.

It is believed that slaters moved originally from marine to terrestrial environments. One species has gone back to being marine dwelling. *Haloniscus searlei* is only known from salt lakes and salt bores. It is also found in Tasmania in a few salt lakes.

The breathing structures are associated with the tail plates that are kept moist to absorb oxygen. In most species up to 5 of the tail plates have gills. Arid zone slaters, from the Buddlelundinae sub-family have modified their breathing structures. These species, occuring from SW Queensland to Western Australia, have four sets of lungs.

Slaters can be highly mobile: some have been followed and found to travel up to one kilometre from their burrows in one night. A species found in arid areas of Queensland is known to swarm and move about the landscape in millions. The Military Slater *Australidillo bifrons* devours any detritus in its pathway. Glen's slides of the swarming slaters were fascinating.

Glen showed a range of slides of slaters and they came in a wide variety of forms. Some slaters have spines on them, and it has been difficult to understand the function of these, though it is possible that it makes it easier for the slater to move through leaf litter by reducing surface contact. Some slaters can hug rocks in a limpet like way.

There are eight main families of slaters in Australia. One species, *Procellonides pruinosus*, from the Family Armadillidiidae, has been introduced from overseas. This is the Purple Slater commonly found in gardens in grass clippings and under stones and wood.

The families in Australia include the Tylidae. These are the most primitive of the terrestrial isopods, mainly living in the littoral zone.

The species in the Family Ligiidae live mainly in the marine zone. They have long antennae. They are often found near marine trapdoor spiders in the wash zone of waves and form their main prey. Species from this family are known to go up freshwater creeks in some countries, and one species lives in the rainforests of North Queensland.

Family Trachelipidae slaters are myrmecophiles, that is, they live with ants, mainly feeding on ant larvae. Some live both inside and outside ant nests. It is likely that they absorb the ant pheromones to avoid being destroyed by the ants. These slaters can clamp themselves down onto the surface.

Slaters from the family Armadillidae take very diverse forms. Some are known to roll up into a ball (interdigitate). These species have very well developed structures for locking their heads and tails together. Others in this Family can clasp down and flick and jump. Strangely, "red-tailedness" is common in this group of slaters.

The *Philosciidae* are fast runners and do not roll up. They are common in rainforest. Glen's nickname for them was "runners".

So slaters (and other invertebrates) can be good for vertebrate experts too, providing an alternative interest in many areas that can be very boring from a vertebrate perspective. These areas, even if highly degraded scrub, may have endemic species of slaters and snails and other animals which have had little work done on them. Unfortunately, unlike vertebrate habitat, these small areas with endemic invertebrates can be easily destroyed with a bulldozer and a few hours of spare time.

Some of the fascinating highlights of the talk given by Glen Ingram,
as noted by Helen Schwencke

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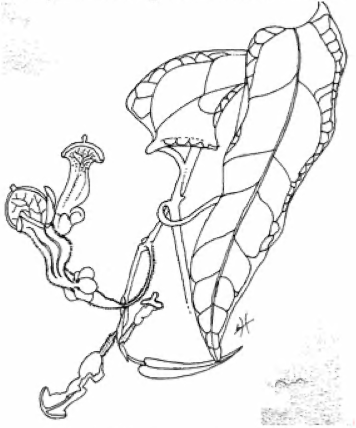
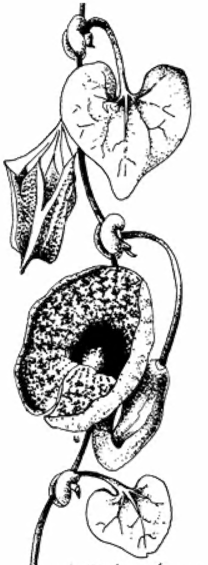
Lorna Johnston has sent in the following article which she had written some time ago for publication in a local paper. She apologises if she is "preaching to the converted". The sketch of the Dutchman's Pipe is also Lorna's work. I have included one of Lois' sketches of the *Pararistolochia praevenosa* so you can see the differences between the plants.

The Killer Vine

Are you killing the Richmond Birdwing?



Aristolochia praevenosa



Aristolochia elegans
(Dutchman's Pipe)

Have you seen this vine?

The exotic Dutchman's Pipe vine (*Aristolochia elegans*) has been grown in gardens in South-East Queensland for many years. It has escaped to become a rampant feral plant, smothering our native shrubs and trees in some areas.

It has played a major role in the near extinction of the spectacular Richmond Birdwing Butterfly, which was once common throughout S.E. Queensland, even flying in numbers in Queen Street, Brisbane.

The plant is a native of Brazil, and unfortunately the female butterflies cannot distinguish it from the Australian native Aristolochias, on which they lay, and which are now rarely seen in the wild. Butterfly larvae feeding on *Aristolochia elegans* are poisoned by the plant.

In order to restore the Richmond Birdwing to its rightful status in our environment it is imperative that all plants of *Aristolochia elegans* be removed and destroyed from gardens and bushland immediately.

Local schools and interested residents are to be commended for their efforts in growing the native *Pararistolochia praevenosa* and *Pararistolochia deltantha* to attract these beautiful creatures.

Please, let's not lure them to their deaths by growing the exotic Dutchman's Pipe, which is also thought to be poisonous to cattle, horses and domestic fowl.

Lorna Johnston

……………………

BRISBANE'S SWAMP BUTTERFLY HABITAT

Many butterfly species have been disappearing from the City of Brisbane during the last one and a half centuries. The Butterfly & Other Invertebrates Club (BOIC) decided to investigate the status of three of these lost butterflies.

This project received a community group environment grant from the Brisbane City Council in 1998. The aim of this project was to identify existing host plant sites, identify sites for potential enrichment and revegetation, raise awareness and network with Brisbane-based community groups which have an interest in local habitats and revegetation.

Each of these butterflies under consideration has very specific host plant needs. This close association of butterfly and plant made it possible to focus on the host plants rather than the butterflies. These butterflies were chosen because they seemed most at risk and also occurred in similar or adjacent wetland habitats.

The butterflies chosen were the Australian Fritillary (*Argyreus hyperbius*), the Brown Soldier (*Junonia hedonia*) and the morrisi subspecies of the Swordgrass Brown (*Tisiphone abeona morrisi*). The Fritillary is listed as endangered in Queensland and hasn't been officially sighted in Queensland since 1994. The Brown Soldier once occurred as far south as Southport, but its range is now contracting northwards where it is still common. The local subspecies of the Swordgrass Brown has not been sighted in Queensland for a long time, its range has been contracting southwards to New South Wales where it is still common in coastal areas. Another subspecies of the Swordgrass Brown occurs north of the Maroochy river.

The host for the Fritillary is the Arrowhead Violet (*Viola betonicifolia*) a small herb which grows in Melaleuca woodland. It also grows in a variety of other habitats such as the slopes of the Great Dividing Range, but the Fritillary is not usually found in these places. The hosts for the Swordgrass Brown are two species of Swordgrass (*Gahnia clarkei* and *Gahnia sieberiana*), which are large grasslike plants that can grow to two metres tall. The host for the Brown Soldier is Karamat (*Hygrophilla angustifolia*), a small plant of Melaleuca woodland and creek edges.

Sites examined were mostly restricted to publicly owned land. The aim was to locate as much remaining habitat with the limited resources available. Unfortunately some promising areas were not adequately surveyed because of resource constraints. For instance, the large Oxley Creek catchment received only two visits (Willawong and Corinda) and neither produced any positive host plant records. Most site visits produced no positive results but the ones that did are listed below.

1. Host plants:
These were found at:
Deagon wetlands - which has both the Arrowhead Violets and Karamat, and is a significant site.
Boondall wetlands - a number of Karamat plants were located here. Small numbers of violets were found on both sides of the Gateway Motorway. Tinchi Tamba Wetlands -no host plants were found onsite, however it is a promising site for enrichment.
Bill Brown Sports Field - one karamat plant was found
Roghan Rd/ Telegraph Rd., Fitzgibbon - on the Roghan Rd side there are still significant numbers of Violets and Karamat. It was not possible to examine the Telegraph Rd side. Violets and Karamat were present at this location several years ago, but none were visible from the footpath.
Ransome Park - Chelsea Rd - a large population of violets exists in this location on both sides of the road.
William Taylor Memorial Sportsground - two violet plants were still surviving in a drainage canal
Heer Park, Wondall Rd. - one solitary Karamat plant was found in a stand of Melaleucas. The site had recently been sprayed with herbicide.
Wakerley Park, Runcorn - a significant population of Karamat was found in the Bonemill St corner of the park
Yugarapul Park, Sunnybank - has a very large and significant area of *Gahnia sieberana*
Kuraby bushland- Gahnia clarkei grows in profusion along sections of the creek line.
Karawatha Forest - Gahnia clarkei occurs along at least one creek line and *Gahnia sieberana* is recorded on a plant list for the forest.
Tingalpa Reservoir, *Burbank* - Violets were located on private land in one of the western gullies leading down to the lake.
J C Trotter Memorial Park, Burbank - Gahnia sieberana was found

2. The Butterflies

The Australian Fritillary

The Fritillary was recorded at Indooroopilly in 1916.The butterflies and violets are now gone from there. The swamp has been filled and transformed into a sports field.

This scenario has been repeated in many places and times since then. Much of the remaining wetland has been invaded by exotic weeds.

Unfortunately not enough is known at this stage about the ecology of the butterfly to make firm recommendations for its management. It is probably firmly linked to the ecology of the Violet and future studies done at sites noted in this survey will no doubt provide valuable insights in this regard. The interim recovery plan for the Australian Fritillary has made provision for these studies to be undertaken when funding is provided. In the meantime it is important that no further damage be sustained by the existing patches of Violets.

Australian Fritillary life cycle

In particular the site at Ransome Bushland should be preserved from any further damage. It has the largest population of violets and these still show some level of genetic diversity. The planting of violets at Melaleuca Environmental Park should be maintained and extended. This park is large enough to provide backup on the southside for the first site should an accident befall it.

The sites on the northside are important because, when taken as a whole, they cover quite a large area. There is also a possibility that there may be additional suitable violet habitat within the adjoining Casuarina forest at Brisbane Airport (in one site outside Brisbane the violets were found growing in association with Casuarinas). With appropriate management, including enrichment and revegetation, there would certainly be enough biomass of violets available to support many Fritillaries on a long-term basis. There is scope for extensive revegetation with Violets in the Tinchi Tamba Wetlands and this would provide part of a corridor linking existing habitats in Redcliffe and Caboolture.

Sources of plants for enrichment need to be carefully considered. Normally diversity would be maintained by propagating from plants found locally. However it is clear that some local populations have passed through a genetic bottleneck and do not display the great genetic diversity found in large populations of violets in relatively pristine sites. This happens when plant numbers are drastically reduced and accentuated by the way that violets produce their seeds asexually for most of the year. Characters that show diversity include: flower colour (white, pink, many shades of purple) shape and scent; leaf colour, shape, size and stiffness; size, colour and number of seeds; etc.

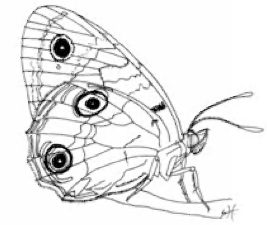
In practice this means that existing sites should be enriched with seeds from local plants but that new sites should be planted with seeds from as many different sources as possible. The forces of natural selection would produce a mixture of forms suitable for that site and the population would have the depth of genetic diversity needed to cope with the difficult niche occupied by the violet.

The Swordgrass Brown

One of the most exciting results of the survey was locating several Swordgrass sites along the Karawatha-Bulimba creek corridor. These sites included both species of Gahnia. While there are undoubtedly enough plants here to support several colonies of butterflies much work needs to be done to ensure their future survival. A local revegetation group has already started the process of identifying and implementing the necessary specific actions.

Some work towards the re-introduction of the butterfly in Redland Shire has already been started. This work will be coordinated with work being done in Brisbane. Interesting work has been done in the City of Knox in Victoria to create corridors to join up populations of their local sub-species of Swordgrass Brown and this has provided some incentive for the re-introduction of our local sub-species.

This butterfly is much better understood than the Fritillary and its introduction to a site is relatively straightforward, as long as the initial introduction contains enough individuals to ensure some genetic diversity. When this work matures the citizens of Brisbane will once again be able to enjoy the sight of this beautiful butterfly.

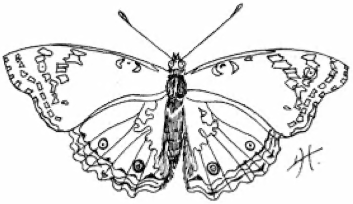


Swordgrass brown

The Brown Soldier

This butterfly has the most optimistic future because there was a probable sighting on a specimen at Thorneside in December 1998 by a member of BOIC. As well its host plant has the widest geographic spread of sites of the three butterflies in the survey.

Karamat can hold its own against some exotic weeds and germinates readily from seed unlike Arrowhead Violet. Cuttings placed in a glass of water will readily form roots it is quite wet. It does prefer much wetter conditions than the Violet. It usually dies back to ground level in winter, and this may give some of its exotic competitors a head start before warm conditions return.



Blue Argus

The host plant has the added bonus of also

Meadow Argus

supporting the native blue-banded bee and three other butterflies - the Tiny Grass Blue, the Blue Argus and the Meadow Argus. These butterflies have other host plants in addition to Karamat, but any extra food sources for them would undoubtedly increase their numbers. The planting of Karamat in Seventh Brigade Park has already resulted in the establishment of a colony of Tiny Grass Blue butterflies there.

While weed control would certainly be necessary, Karamat has a potentially large habitat available for it. Along many creeks there is already a similar exotic weed established that could be replaced by it. Even creeks that have been turned into drains or canals are suitable, as long as they don't have concrete sides. The main limiting factor would be the number of people willing to put time and resources into establishing and maintaining this plant in any suitable spot. Most of these suitable spots are presently occupied by exotic weeds and unsuitable for trees because of flood control regulations. Wouldn't it be great to plant a genuine native and four star butterfly plant in these spots?

It would also be important to maintain any existing populations in places such as Boondall Wetlands. While there is not as much diversity in Karamat plants in pristine habitats as compared with Violets it is still worth preserving what remains. Boondall still has quite a few plants as does Deagon Wetland. The single plant surviving in Heer Park provides a classic example of a genetic bottleneck.

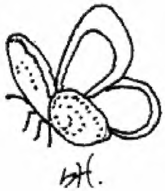
3. Experimental Plantings

In consultation with local groups seven sites were selected for experimental plantings of Violets and/or Karamat. Unfortunately supplies of Sawsedge plants were not available.

The locations were:- Teralba Park, Everton Park; Sherwood Arboretum, Sherwood; Seventh Brigade Park, Chermside; Melaleuca Environment Park, Manly West; Enoggerra Creek, The Gap; Butterfly habitat, Dutton Park; Wakerley Park, Runcorn

Results of the plantings were mixed but generally encouraging. The dry weather during the early part of the project did not help the establishment of the plants. The more recent wetter weather has increased survival rates. The main lesson to be learned was that a lot of effort needs to go into weed control in the early stages.

The most gratifying result was the establishment of a small colony of Tiny Grass Blue butterflies on the Karamat plants in Seventh Brigade Park. A small taste of what is



Tiny Grass Blue

possible for the other butterflies.

If there is an increase in interest in helping the recovery of these butterflies, these sites will provide an important focus for any involvement that people want to provide. If more people become involved more sites can be developed.

Of particular interest is Wakerley Park. Though most of the park has been filled and leveled a small portion on the corner has escaped and retains the original topography. Bounded by streets on two sides, a creek and a sports field on the other two sides, it would be isolated from sources of new weed infestations if it was rehabilitated. By including other swamp plants as well as the butterfly host plants it would provide an example of a plant community that has almost completely disappeared from Brisbane. Best of all many of these would be visible to the public from the footpath.

4. Public awareness and networking

As part of this project the Butterfly & Other Invertebrates Club conducted an informal program of providing basic information on butterflies to any interested group. This involved a general presentation using slides of butterfly lifecycles to a variety of groups. Sometimes it also included involvement in planting of butterfly host plants in revegetation projects.

Hopefully this public education will be expanded to include specific activities around the butterflies in this report. However this will require a high level of time commitment and resources which are not available at the moment.

The Butterfly Habitat at Dutton Park was initiated in cooperation with the Dutton Park Scout Group. It contains specimens of all of the host plants covered in this report, and is being developed primarily as a resource for revegetation groups. It is anticipated that it will contain specimens of most of the local butterfly host-plants for south-east Queensland in a natural setting.

Conclusion

I would like to thank all those who gave their time and showed me the locations of the target species. This report would have been impossible without them. Thanks also to all those groups who participated in the trial plantings, much valuable information was gained. Thanks also to the Brisbane City Council for assisting with the funding of this project.

Frank Jordan

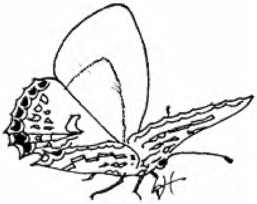
CREATURE FEATURE

Cephenes Blue *(Pseudodipsas cephenes)*

"Can you collect seeds of *Sterculia quadrifida* on your way home from work?" was the question I was asked as I left work at Barung Landcare, Maleny, on the afternoon of the 30th September last year.

"No problem," I said and walked out into the fading light.

I didn't know it at the time, but this was to be my first encounter with larvae of the butterfly known as *Pseudodipsas cephenes*, commonly called Cephenes Blue. They are not found on the Sterculia tree I went to collect seeds from, but on a very maligned vine that is growing on the outer fringes of the remnant patch of rainforest.



Cephenes Blue

This vine goes by the name of *Smilax australis* but most of us would know it better as Barbed-Wire Vine, having had it scour our legs as we walked through the bush. I had a few things working in my favour this day, the first being the time of day. As I didn't finish work until five pm., it was almost dark before I reached the area where I found the smilax. This was a major factor, as the larvae of Cephenes feed mainly at night. The next thing in my favour was the fact that Cephenes is one of a fairly large group of butterflies, whose larvae feed in association with ants and I had encountered these ants on previous occasions attending the larvae of another butterfly, Miskins Jewel. The third thing was the feeding pattern of the larvae, unlike the larvae of Miskins Jewel, whose larvae "skeletonize" the leaves of the foodplant, larvae of Cephenes have typical caterpillar feeding actions i.e. eating from the edges in a semi-circular motion. "Skeletonized" is the term given to a leaf that has had its outer laminar removed, leaving only the exposed veins.

The first thing I noticed, was the Barbed-Wire Vine, *Smilax australis*. We all know how easy that is to find, especially when not looking!

Smilax australis

Out of habit, I then looked for the special ant needed for the butterflies survival *Iridomyrmex gilberti*. I recognize this ant by its size, being slightly larger than the common black ant found in our gardens and also by the abdomen having a slightly grey appearance. If these ants are attending larvae, there will be a steady stream of them walking up and down the vine, with small groups surrounding the butterflies larvae, following them wherever they go.

"Yes!" both ants and larvae but unfortunately also thousands of mosquitoes. My legs were so sore from bites, I had to brush them off.

On looking back at the vine, after only seconds(!) there were no ants or larvae.

I followed the vine down towards the ground and there, about one metre from where I first found them, were the ants and larvae. Some of the larvae crawling quickly, whilst the smaller ones were being carried by the ants, down into the darkness at the base of the rainforest.

I managed to gather up about ten larvae and took them home for observation.

I didn't find the Sterculia until the next day!

Anybody wishing to grow Smilax can purchase plants from Barung Landcare, Maleny.

Further information on this subject can be had by reading "Butterflies of Australia" by Common and Waterhouse, 1981.

Bob Miller
Sept. 1999

Insect Observations in the Granite Belt – Part 1 by John Moss

In early December last year (1998), three of us, Lindsay Popple, Don Sands and the writer, travelled to Stanthorpe and had a two day guided tour of the granite-based montane heathlands and associated woodlands, by none other than the butterfly guru of the Granite Belt, Mrs. Jean Harslett, recipient of the Queensland Natural History Award for 1995.

All of the original records of butterflies (especially the skippers, satyrines and lycaenids) in the Stanthorpe district were made by Jean over half a century ago and are listed in most of the well-known Australian butterfly publications, so we were indeed fortunate to have such a knowledgeable local authority as our guide.

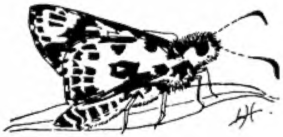
The three main sites visited were Mt. Marlay at Stanthorpe, Mt. Norman environs south of Girrahween National Park, near Wallangarra in southernmost Queensland, and Basket Swamp/Bark Hut Swamp forestry areas north of Tenterfield in NSW. We were on the lookout primarily for early summer species of subalpine skippers (family Hesperiidae) and mountain cicadas (family Cicadidae), although various species of "Blues, Coppers and Hairstreaks" (family Lycaenidae) caught our attention, as well as some very interesting day-flying moths (subfam. Argaristinae).

Our first stop at Mt. Marlay, which is within the Stanthorpe town limits, was made in slightly overcast conditions early to mid morning on the 2nd of December. We were interested in finding any hilltopping species of blues or skippers as well as the resident cicadas.

We were amply rewarded with the sighting of males of 6 of the skippers, namely; *Hesperilla malindeva, H. donnysa, H. ornata* ("Spotted Sedge-skipper"), *Trapezites* *eliena (*“Orange Ochre”) *Toxidia peron* (“Dingy Skipper”) and *Netrocoryne repanda* (“Eastern Flat”).

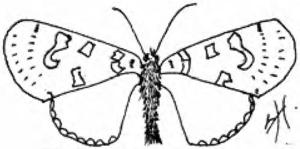
Also seen were several blues including *Theclinesthes miskini* (“Wattle Blue”) and *Candalides cyprotus* (“Copper Pencilled-blue”) plus several day flying moths including *Phalaenoides tristifica, P. glycine* and *Eutrichopidia latinus ,*males of which were seen flying fast and high near the communications transmission towers on the very peak.

Meanwhile we were being serenaded by yodelling choruses of the Red-eye Cicada (*Psaltoda moerens*) which as its name suggests has reddish eyes in life (dull grey in dead specimens), and is generally a matt black in overall colour.



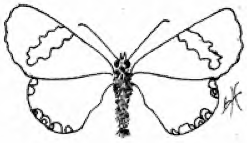
Hesperilla ornata

We next traveled to the southern end of Girrahween National Park to the Mt. Norman area, accessible by road from Wallangarra. Travelling up Mt. Norman road, which roughly parallels Racecourse Creek, we were welcomed by a deafening chorus of at least 5 species of large cicadas, which almost drowned out our conversation.



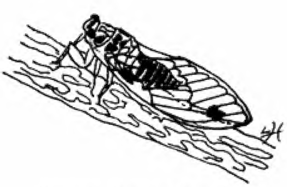
Phalaenoides tristifica

Those identified included *Thopa saccata* (“Double Drummer”), *Macrotristria angularis* (“Cherry Nose”), *Cyclochila australasiae* (“Greengrocer”), *Psaltoda moerens* (“Red-eye”) and *P.harrisii* (“Yellowbelly”).



Eutrichopidia latinus

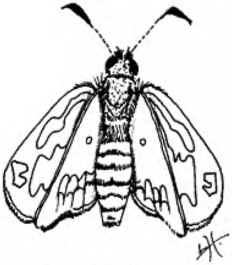
Some of the smaller species identified included *Cicadetta labeculata* (“Spotted Wattle Cicada”), *Cicadetta* sp. aff. *denisoni* (“Brown Firetail”), *Cicadetta oldfieldi* (“Wattle Cicada”), *Pauropsalta mneme* (“Alarm Clock Cicada) and *P. collina* (“Mountain Squeaker”). It wasn’t long before other species of cicadas were heard which have not as yet been described – these 2 or 3 species were fast flying, cryptic and possessed ticking and/or ventriloquial songs, all of which make collection and identification very difficult.



Spotted Wattle Cicada

Wattle Cicada

At the end of this road was a large sedge and rush swamp, nestled between Mt. Norman and the peaks along the Qld/NSW border. Jean pointed out various sites where some of the restricted butterfly species were collected many hears before. As if right on cue, some of these fascinating skippers made their appearance, beginning with the beautifully patterned *Trapezites phigalioides* (the "Montane Ochre") of which we observed 6 or 7 specimens, mostly females. With the magnificently marked *Trapezites iacchoides* (the "Silver-studded Ochre") we were not so lucky, with only 1 worn female being sighted. Several other more widespread species were also in evidence including the Greenish Darter (*Telicota ancilla*), Spotted Sedge-skipper (*Hesperilla ornata*), Dingy Skipper (*Toxidia peron*), Banded Grass-skipper (*T. parvulus*) and Dingy Grass-dart (*Suniana lascivia*).


Greenish Darter

Another beautifully patterned species, *Hesperilla crypsagyra hopsoni* (the "Silver Sedge-skipper"), which is also restricted to this habitat, was not found on this occasion. This was a little disappointing, especially for Don, who was hopeful of finding it – but maybe next time!

Later in the afternoon we encountered the "Fringed Heath-blue (*Neolucia agricola*) and the "Bright Copper" (*Paralucia aurifer*) near its hostplant *Bursaria spinosa*, and found in the swampy area, females of two of the day-flying moths seen earlier in the day at Mt. Marlay.

On the way out, we lingered, hoping to come across some late afternoon insects, we were rewarded by the sight of several large female "Common Imperial Hairstreaks" (*Jalmenus evagoras*) ovipositing on a species of ferny-leaved acacia, but as for Jewels and Azures we saw none. We did however find a grassy patch where many specimens of a common small cicada, *Notopsalta atrata* or "Fence Buzzer", were congregating. They appeared to be of a smaller size than usual and uncharacteristically were resting/singing on grass stems and smaller bushes rather than on the nearby trunks, stumps and fence posts. Another small species *Cicadetta puer* was found on *Cassinia* and other bushes near the roadside. This has a soft, barely audible buzzing song and is common along roadsides in montane areas of NSW and southern Queensland.

After a successful days observations, we left our pristine and productive little valley and returned to Stanthorpe, looking forward to what surprises day 2 would provide for us.

John Moss

CREATURE NOTES

Creature Note #18

Having recently renewed my interest in snails, I was fortunate enough to find several different types in the last month. The first sort I found on a brick wall outside the

Mater Hospital in South Brisbane. They looked a bit like small garden snails, but a bit flatter and the body had a distinct beige colour. There were lots of them and they turned out to be an exotic - the Asian snail, *Bradybaena similaris*.

The next snails were found while weeding at the Butterfly Habitat in Dutton Park. The first and smallest at 3mm, was shaped like a whelk. It was another exotic, *Lamellaxis clavulinus.*

There were several snails attached to some of the leaves of some of the plants. They had small shells in relation to the rest of their bodies. The turned out to be the semi-slug*, Fastosarion virens* . The specimen identified was a juvenile. They feed on the algae growing on leaves.

Many large empty shells were found that looked like empty garden snails, but these turned out to be the remainder of *Sphaeorspira fraseri*. They are often mistaken for the exotic garden snail.

Lastly I found a snail with a flattened coiled shell. I was a bit concerned that it didn't accept any of the carrot, lettuce or mushrooms eaten by the other snails. I need not have worried. This snail turned out to be a sub-adult specimen of the genus *Strangesta.* These are carnivorous snails and it proved this by eating one of the other snails.

While doing my weeding I was often accompanied by Brush Turkeys and occasionally came across Blue Tongue Lizards. These are some of the other animals that are predators of snails.

These snails were identified by John Stanisic, from the Queensland Museum.
John will be presenting a talk to the Club on the 27th October.

Frank Jordan

Creature Note #19
The Red Ash Sawflies Again

In June 1993 following prolonged and sometimes heavy winter rain, the 3 metre Red Ash*, Alphitonia excelsa*, outside my kitchen window had all but disappeared. 95% of leaf material had been eaten. Red Ash or Soap Tree is eaten by a lot of insects but the normal pattern is 'moth eaten' not totally stripped. This was totally stripped, each leaf eaten until only the hard centre vein was left.

The culprit was a light green grub with a large yellow head and two long filaments protruding from the tail end. There were dozens covering a fairly small tree and were some sort of sawfly larvae.

When I showed them to Dr Geoff Monteith at the Queensland Museum, he recognised them as an undescribed species of *Philomastix*. The species was first discovered by Toowoomba school teacher, Mike Groth, just outside Dalby in the winter of 1992.

The beast has now been described as *Philomastix xanthophylax* Naumann & Groth 1998.

Xantho-philax means 'yellow guard', the bodies of the females being yellow and 'guard' describes the habit of female *Philomastix* in sitting above the egg mass and buzzing wings vigorously if the oviposition site is threatened.

In 1994 they erupted again after substantial winter rain and again stripped my Red Ashes bare. This time I caught some adult females but missed the much smaller and more mobile males. Entomologist Jan Grigg collected males and females at her residence in Brookfield during the same period.

They were now known from Dalby, Bellbird Park and Brookfield. Since then only Camira and Moggill have been added to known sites despite my searching every Red Ash, every where I go, every time the elusive grubs appear. Nowhere has the species been recorded on anything except Red Ash, despite considerable searching and as a result I've found myself referring to them as the Red Ash Sawfly. I hope that offends no one. The last eruption in my backyard occurred in July this year and were recorded as a world television first on Pat Comben's Wildlife Watch on Channel 7. Dr Chris
Burwell of the QM recently expressed an interest in obtaining some additional adult material and there is obviously a need for survey work to determine this intriguing insect's distribution.

Perhaps BOIC members might help in this regard. This season however is over. Once the larvae are obvious, the adults have long gone. To collect adults one will need to search Red Ash leaves after decent rain from May onwards.

So what's the rain connection? When the larvae reach maturity, they descend the host plant to pupate in the ground sometimes more than 50mm down. I have dug up pupal cases, in summer from almost rock hard clay that my Red Ashes grow in. Obviously hatching from the pupa is one thing. Getting through a hard substrate is another, so it is going to coincide with a softened substrate made possible by substantial rain.

Their big enemy is the Fantail Cuckoo. In fact I was alerted to the grubs this year by the delightful call of the Fantail Cuckoo. My bird developed the habit of arriving in the late afternoon and dining on *Philomastix* larvae till sundown. Despite this predation the numbers game is on the side of the sawfly.

Ric Nattrass

"BYE - GONE BUTTERFLY DAYS"

Errata: Because of the complicated listing of common and scientific names in last issue's article, two lines were inadvertedly combined. This should now read
Nacaduba dubiosa = *Prosotas dubiosa* = Small Purple Lineblue.

Nacaduba felderi = *Prosotas felderi* = Felder's Lineblue - ?=Southern Line-blue (see comment)
Also – *Thysonotis hymetus taygetus* (spelling corrected).

Comment: "Southern Line-blue". This last name, recently proposed as an alternative to "Felder's Lineblue" is not very imaginative. I can think of at least another ½ dozen species that are equally southern in distribution. Any of our readers who are familiar with the little beastie may like to propose a more appropriate friendly name.

1909 Excursion:
This issue's historical article extract is taken from the Queensland Naturalist Vol.1 No.5 of March 1910, and the authors are Henry Tryon (the then Government Entomologist) and Edmund Jarvis (an amateur entomologist of the time). It concerned an excursion to Rocklea, an industrial suburb now, but in those days a fairly pristine area of wetland and woodland.

It is particularly interesting to me because of the mention of two small cicada species, *Pauropsalta annulata* and *Melampsalta nebulosa.* The former, our "Sprinkler Squeaker", is till a common Brisbane species, but the latter is poorly known and probably the same species (synonym) as what we know as *Cicadetta multifascia,* a small blackish species with red abdominal rings, the "Neon Ambertail", which sometimes appears in large numbers after a mass emergence, such as that as recorded in this article.

Another possibility for *M. nebulosa* is *Pauropsalta rubea,* a pretty, reddish-coloured species known as the "Red Squeaker", although this is less likely as its "mass" emergences are never in "thousands" as reported in the article, nor are the exuviae usually "attached to stalks of grass plants".

A third possibility is a small grass frequenting species *Parnkalla muelleri* known in the agricultural literature as the "Yellow Sugar Cane Cicada" which actually prefers other native and some rank exotic grasses, and for which has been suggested the much more appropriate and friendly name "Grass Fairie".

The original "type", from which the species *M. nebulosa* was described in 1904 by F.W. Goding and W.W. Froggatt, came from Queensland, and was collected by Henry Tryon. This would normally have been lodged in the Macleay Museum, Sydney and later transferred to the Australian National Insect Collection in Canberra. However, it has been missing since before 1956, and without it we may never know for sure just what is *M. nebulosa,* as the 1904 description is not really clear nor unambiguous, and was probably made from a recently emerged ('teneril') specimen that had not developed its final coloration.

The other observation of note concerns the butterfly *Heteronympha merope,* the Common Brown which in the Brisbane area only occurs on the slopes of Mt. Cootha and the D'Aguilar Range. Further south, in more temperate climates, it comes down to sea-level. The article clearly identifies it and gives the impression it was not uncommon (with males only appearing at that time of the year – October – as is their usual habit). I would suggest that the native grasses – its larval hostplant – have since been supplanted by rank exotic grasses, and we would now be unlikely to find it at that site, its place probably being taken by the more adaptable Evening Brown butterfly. Now read on!

"Excursion to Rocklea, 9th October, 1909 – Report on Entomology – Leaders: H. Tryon and E. Jarvis

……………

"In rather drier spots, but still within the area occupied by the paper- bark tea trees, were found, commonly amongst leafy debris, fine examples of the large tenebrionid beetle, *Adelium striatum,* and in the sandy soil itself, just beneath the surface, and ready to emerge, examples of *Scitala* and *Heteronyx*, the former closely resembling the scarabgaeid beetle that is so destructive to mango blossoms at this time of year. In the same situation, but where the leaves had given place to a grassy growth, occurred the chrysalis of *Heteronympha merope* – one of the few butterflies that pass the stage in their life referred to beneath the surface of the ground. The imagos were flitting about close to the earth, very demurely; only examples of the male sex being represented.

…………….

Leaving the flat and proceeding on to higher ground, the quest for insects was pursued amongst some large Eucalypt trees.

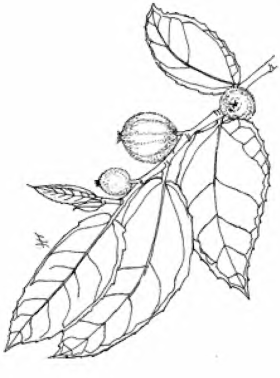
In one spot there was a remarkable prevalence of one of our smallest Cicadas, *Melampsalta nebulosa.* Thousands of the empty pupa cases were to be seen attached to the stalks of grass plants, even within our area of a few square yards, and the adult insects themselves were found close at hand, as if recently emerged (E. Jarvis). Another Cicada was also found here, but occurred in much fewer numbers – it was the *Pauropsalta annulata* – and a living pupa apparently of the same species was dug out.

………….."

PLANT PROFILE

Creek Sandpaper Fig

Ficus coronata is one of three local sandpaper figs. It is usually found growing near creeks. The abrasive sandpaper like leaves are a distinctive feature and it is speculated that this evolved to protect them against Diprotodon-like megafauna which existed many thousands of years ago. This would also account for the tree's ability to regenerate even when cut down to ground level as could have been the case when these soft-wooded trees were trampled and eaten by car sized marsupials.



Ficus coronata

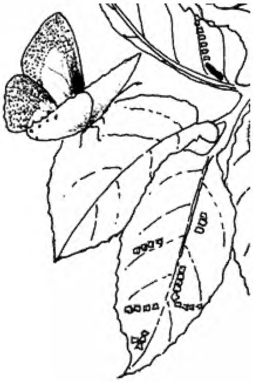
The tree I have growing in my backyard has achieved a height of about eight metres and a circumference at waist level of about seventy centimetres. This has been after about ten years growth. It would probably be a lot larger if not for frequent defoliations by the fig beetle.

The fig beetle is a small plump brown beetle. The adult can feed on the leaves but most of the munching is done by the black, slightly spiky larvae. They move about in groups and are usually easy to see. They exude an unpleasant fluid when disturbed. An established population of assassin bugs will usually keep them under control but will also reduce the number of butterfly larvae.

The hedge grasshopper and some moth caterpillars also feed on the leaves. One small plain green caterpillar we raised to adulthood produced a rather beautiful small moth. There are probably a lot more other interesting surprises waiting to be found.

The common moonbeam butterfly (*Philiris innotata*) also completes its lifecycle on the sandpaper figs. The adult is white on the outside wings and brown or purple on the inside. While the caterpillars have the basic "green slug" body plan of the *Lycaenid* group, they are quite flat and have numerous small indentations to break up the body outline. They are coloured green and yellow and blend in well with the underside of the leaves where they feed. When they feed they leave the top layer of the leaf intact and

this results in distinctive tracks which eventually turn white. This makes it very easy to locate the caterpillars.



Common Moonbeam

The fruit when ripe is black, slightly furry, about 2 cms long and can be found from the ends of the branches all the way down the main trunk of the tree. It is edible but bland, and it can help to rub off the skin before eating. It is also probably eaten by many types of birds but I do not have a list of these.

The fruit can best be thought of as an inside out mulberry. If it is cut in half it is possible to see the many tiny segments making it up. Interestingly the fruit is pollinated by tiny wasps which complete most of their lifecycle inside the fruit. This lifecycle is complicated and in some species of figs even involves two slightly different types of fruit on the same tree. I try not to think about this when eating the fruit.

The tree is not too fussy about soil type but does need adequate water to grow well. It is probably prudent to grow it away from brickwork and concrete paths. It can be grown from seed and sometimes cuttings.

Frank Jordan

WORLD WIDE WEB SITES TO WATCH

We have been bringing this segment to you over the past few issues. However, I'd like to take the opportunity in this issue to invite one of our members with the necessary skills, or the time and ability to develop those skills, to become our Club's Webmaster. There is a range of information which we could usefully publish on the World Wide Web, and it could be a very useful recruitment tool. As our program runs in quarterly cycles, it would need to be updated on this basis also.

So, if you have time and the inclination, please volunteer to get our Club into our own column on World Wide Web Sites to Watch!

Helen Schwencke

YOU ASKED

Q. Do all butterflies have six legs?

A. This can be confusing. Butterflies belong to the Class *Insecta*, and by definition this group of animals has six legs. Other groups, such as spiders, mites and ticks have eight legs. But some butterflies, for example, Monarch or Wanderers only seem to have 4 legs. Some species of butterflies have evolved to have a reduced set of front legs - they are there if you look up close, but they are rudimentary and don't function as legs.

Helen Schwencke

HELP WANTED

Fireflies - A number of club members have a growing interest in fireflies. It can be a wonderful experience seeing these creature just after dusk - they add magic to an early evening stroll, or visit to a park for a BBQ. At Ourimbah in New South Wales, a Rainforest tourist attraction holds a month long Firefly Festival in November. We think it would be wonderful if we could help draw attention to areas in our region where people can see fireflies.

These beetles are a good group of animals for club members to start working on. We would like to invite a club member to volunteer to become the person who keeps a record of where fireflies can be seen. Please contact Helen or Frank on 3844 6677.

HAVE YOU GOT AN INVERTEBRATE STORY TO TELL. THIS MAGAZINE IS FOR THE MEMBERS TO SHARE THEIR OBSERVATIONS AND EXPERIENCES SO PLEASE CONTRIBUTE.

LIBRARY BOOKS FOR LOAN

The following books are currently available for loan at meetings:-

Australia's Butterflies, by Peter Wilson
Butterfly Magic, by Helen Schwencke and Frank Jordan
Australian Cicadas, by Max Moulds
Butterflies of Australia, by Common and Waterhouse, 1981
Butterfly Watching, by Paul Whalley
Flying Colours, by Mike and Pat Couper

ADS AND EXCHANGES

Sometimes you may have an oversupply of legally obtained caterpillars of non restricted species and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective "foster parents'. Have **YOU** advised Rob of the host plants you have available?

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Butterfly Club Planning and Management Meeting
When: Wed 13th October, 7.30pm - 9.30pm
Where: Rob MacSloy's place at Capalaba
Contact: Rob for address and details, 07 3824 4348, or Helen 3844 6677

Guest Speaker: Dr John Stanisic, Queensland Museum speaking on the "Land Snails of South East Queensland"
When: Wednesday, 20th October, 1999, 7.30 - 9.30pm
Where: Downfall Creek Bushland Centre, Rode Rd., McDowall
Contact: Helen 3844 6677, fax 3844 4333, email hschwenc@dovenetq.net.au

Pine Mountain Excursion
When: Sunday, 14th November, 1999, starting at 9.30am (to beat the heat)
Where: Meet at Kholo Botanic Gardens (also marked as Mining Museum on the UBD Map 192/N13), Riverside Drive, Kholo. From there we will drive to the site access point.
What: We will be visiting a site which has been newly reserved by the Ipswich City Council. Some thirty-three species of butterflies were seen at this location in March this year when it was visited by a number of Club members.
Bring: Your own lunch, drinks, insect repellent
R.S.V.P. Helen 3844 6677, fax 3844 4333, email hschwenc@dovenetq.net.au

Dragonfly Excursion (and End of Year function) to be led by Ric Nattrass
When: Sat 11th December, 1999 starting 2.30pm
Where: Meet at the Mt. Cootha Botanic Gardens

What: The excursion will be followed by a BYO BBQ or picnic dinner and light trapping at JC Slaughter Falls at the base of Mt. Cootha. During the afternoon we will be visiting good dragonfly sites at the Gardens and in the local vicinity. We will be helping with recording information for NatureSearch
Bring: Your own afternoon tea, dinner, drinks, crockery and cutlery, snacks to share, torch and insect repellent
RSVP/Contact: Helen 3844 6677, fax 3844 4333, email hschwenc@dovenetq.net.au

ACKNOWLEDGMENTS

Producing this newsletter is done due to the efforts of:

- Those who sent in letters and articles
- Lois Hughes who provided illustrations and developed the cover
- Daphne Bowden who works on layout, production and distribution
- Stephen McGoldrick who works on production and layout
- John Moss for scientific referencing
- Helen Schwencke who developed the overall design and works on content
- Frank Jordan for inspiration

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.
Membership fees are $10.00 for Individuals/Schools and $15 for family membership.

Butterfly and Other Invertebrates Club Inc.
c/- PO Box 2041
Runcorn Q 4113

Next Meeting: 20th October, 1999 – Land Snails of S.E. Queensland